

**Community Advisory Council
September 9, 2016
Action Items/Notes**

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. 2015 Site Environmental Report
5. Agenda Setting
6. Fukushima Daiichi Nuclear power plant
7. Community Comment

1. Attendance

Members/Alternates Present: See Attached Sheets.

Others Present: S. Bogart, J. Carter, B. Dorsch, N. Fisher, D. Gibbs, M. Israel, D. Manning, G. Mattson, D. Paquette, R. McKay, R. Reeder, J. Remien, L. Rundlett, N. Sundin,

2. Correspondence and Handouts

Items numbered one and two were e-mailed to Members on September 2, 2016. Items numbered three and four were available as handouts at the meeting.

1. Draft agenda for September 9, 2016
2. Draft notes from the June 9 meeting
3. Copy of Presentation: 2015 Site Environmental Report
4. Copy of Presentation: Fukushima Daiichi Nuclear power plant

3. Administrative Items

The meeting was called to order at 6:33 PM. Reed Hodgins, facilitator, welcomed everyone to the meeting. He reviewed the ground rules and draft agenda and those present introduced themselves.

Member Guthy said she has been a member of the CAC since its inception, she has learned a lot and has enjoyed being part of the CAC, but will be stepping down next month. Linda Rundlett will be her replacement. Member Guthy would like to remain an alternate so she can continue to receive information.

Hodgins spoke about the CAC Guidelines with regard to membership and said that anyone who has been a member since the Guidelines were adopted five years ago is scheduled in November to renew their membership. He suggested making a change to the Guidelines so that members in good standing that have not requested removal can have their membership renewed automatically.

Member Jordan-Sweet said if we automatically extend the memberships, in another five years we will have the same dilemma. It would be more appropriate to have a formal request process and then a simple vote.

Member Esposito suggested a form that Members can fill out to extend their membership for another five years.

Hodgin said we will create and email forms for CAC members to fill out and then we can discuss how to handle the voting part. There will be no change to the Guidelines.

***ACTION ITEM: Mail form to CAC members for them to fill out to continue membership.**

Member Jordan-Sweet said her suggestion is that when voting on a group continuing their membership, we ask each group to leave room while we discuss their request.

Hodgin said he will work on a voting process and bring it back to the CAC in October.

Hodgin then said that Brookhaven Science Associates is unable to support the Energy Forum that had been discussed because there will be a variety of opinions that could be taken as policy statement of BSA and the Lab. The suggestion is for the CAC to do it as a group of individuals, not representing the Laboratory or BSA.

Member Esposito said this is disappointing. She said there will be a discussion on off-shore wind co-sponsored by the Long Island Association. If anyone is interested, I can get the information to you. It will be at the end of September from 7 – 9pm.

Hodgin said the Lab will send an email to Members with the information.

ACTION ITEM: Send the CAC information about the discussion on off-shore wind co-sponsored by the Long Island Association.

Approval of Minutes

Member Doroski said his comment on page three should read: ... are there other radionuclides, such as Carbon-14, which might be expected from such a reactor.

The June notes were approved as amended with none opposed and three abstentions.

4. 2015 Site Environmental Report – Jason Remien, Manager – Environmental Protection Division

Jason Remien said the 2015 Site Environmental Report (SER) will be available online in a few days and hard copies will be brought to the next CAC meeting. He said the Annual SER is required by DOE and is an official record of BNL's environmental impact for the calendar year. Many of the topics have already been covered at CAC meetings.

He spoke about the Environmental Management System (EMS) ISO 14001 and the Pollution Prevention (P2) Program. He spoke about the various types and quantities of waste handled during routine and non-routine operations. Remien said BNL must comply with 36 permits, including a Title V permit authorizing operation of 130 emission sources. There were 132 projects reviewed for National Environmental Policy Act (NEPA), which included 127 minor actions and 5 environmental evaluation notification forms. All were categorically excluded or fell within the scope of the existing Environmental Assessment (EA). Usage of potable water was similar to 2013 & 2014 and complied with all drinking water requirements. Due to strong performance in previous audits of petroleum bulk storage, the New York State Department of Environmental Conservation (NYSDEC) exempted the Lab from its annual inspection in 2015.

Member Esposito asked what has caused the reduction in on-site water usage.

Remien said the Lab no longer uses once-through cooling. We are now using a closed loop cooling system.

There were 21 spills in 2015, three of which were reportable to the NYSDEC and then they were all closed out. There were no Occurrence Reporting and Processing System (ORPS) reportable spills.

There were 6 State Pollutant Discharge Elimination System (SPDES) permit excursions. Metals that were detected in surface water samples were consistent with SPDES limits or attributable to natural sources. There were no Volatile Organic Compounds (VOCs) detected above contract laboratory's Minimum Detection Limits (MDLs). Tritium was detected above MDL in a single sample collected at Basin HO. No Cs-137, Sr-90, or other gamma-emitting nuclides attributable to Laboratory operations were detected.

The Environmental Protection Agency (EPA) inspection performed in 2015 did not identify any issues with the Resource Conservation & Recovery Act (RCRA) program. Minor Underground Storage Tank (UST) program deficiencies were identified and were addressed immediately.

The NYSDEC found no issues with air during the August tour of permitted facilities. No issues were identified with regard to the SPDES permit during the annual surveillance inspections. In February, the NYSDEC performed a RCRA inspection and four violations were identified. No issues were identified at the Sewage Treatment Plant (STP). Potable water deficiencies identified are being addressed by Facilities & Operations (F&O).

Member Krupski asked if any comparisons were done with regard to air quality onsite and Plum Island.

Remien said no.

Three facilities were monitored for radionuclide releases; BLIP, Bldg. 801 target processing Lab, and the HFBR. Total radionuclides released were 4,551 Ci. BLIP emissions of short-lived radioactive gases O-15 and C-11 accounted for 99.99% of total.

Member Jordan Sweet said 99.99% of BLIP emissions that were accounted for leaves .01% unaccounted for, which could be quite a large amount. What happens to that? It is more than what was in the tritium spent fuel pool.

Remien said he does not know.

Hodgin asked Remien to bring that information back to the CAC

ACTION ITEM: Bring information about the unaccounted BLIP emissions to October CAC meeting

Radiological air quality monitoring at the four onsite locations found gross alpha and beta concentrations consistent with natural background levels. The average tritium concentrations were less than typical MDLs.

The ambient external dose, as measured by TLDs was 64 mrem on site and 59 mrem off site. The conclusion was that there was no external dose contribution from BNL operations.

The total effective dose to the Maximally Exposed Off-Site Individual (MEOSI) in 2015 from inhalation/immersion and ingestion pathways was 3.15 mrem, which is well below regulatory limits.

5. Agenda Setting

Nora Sundin said Tim Green will present on Chapter 6 of the SER in October and Bill Dorsch will present on Chapter 7 in November. Also in October, John Peters will present on nano-safety and we will have the answers to the questions brought up in Jason Remien's presentation tonight. We will also discuss membership renewals.

6. Fukushima Daiichi Nuclear power plant - Nicholas Fisher, School of Marine and Atmospheric Sciences – Stony Brook University

Dr. Fisher spoke about the earthquake, tsunami and the failed Nuclear Power plant disaster on March 11, 2011 in Fukushima. He said about 20,000 people drowned as a result of the incident. To our knowledge, there have been no deaths due to the release of radioactivity; however, there is much anxiety over it. He said there was less radiation released than at Chernobyl, but this release was into the ocean.

He talked about his research cruise two months after the disaster to gather samples and conduct analysis of the waters in the surrounding area. He spoke about the Pacific Bluefin tuna and explained that they migrate across the ocean from Japan to California and that his testing revealed post Fukushima measurable amounts of ^{134}Cs and elevated ^{137}Cs .

Member Esposito said Sr-90 can build up in humans.

Fisher said it does not come from fish

Member Jordan-Sweet asked if Cesium and Potassium are both gamma emitters.

Fisher said yes.

Member Doroski asked if there was any evidence of Plutonium.

Fisher said they did not see any, but it is rumored to be there in low levels closer to the shore.

Member Corrarino asked if Bluefin tuna excrete the Cesium as they cross the ocean, where does it go and what happens to it.

Fisher said it is a small amount and is being diluted in a large body of water.

Member Esposito said cumulatively there could be a lot of impact.

Fisher said that Japan is looking into that. It will be hard to determine if it is caused by Fukushima because Japan had a high rate of cancer beforehand. Methylmercury in fish is a bigger problem.

He concluded that ^{134}Cs and ^{137}Cs accumulated in Bluefin tuna in waters off Japan are retained during their migration across the Pacific. Yellowfin tuna, which are residential species, show no evidence of Fukushima radioactivity.

7. Community Comment

Hodgin asked for comments from the community. There were none.

The meeting adjourned at 9:03 PM.

Next meeting: October 13, 2016

CAC Agenda Setting – November 12, 2015

TOPICS

Advances in Renewable Energy Technologies – 10

~~Update on Fukushima—9 (9/9/16)~~

NASA Research – 8

Holographic Principles of Quantum Mechanics – 7

Gamma Forest & Tour – 7

~~Medical Research at BNL—7 (April 2016)~~

~~DOE Funding & Research Priorities & Impact on BNL—7~~

Update & Advances on Battery Storage – 6

Discussion of Neutrino Projects at BNL – 6

Global Warming & Sea Level Rise – 6

Nanotechnology Research at BNL – 5

Capturing the COSMOS LSST – 4

Groundwater Monitoring Around New Facilities – 4

Advances in Solar Energy – residential & commercial – 4

Climate Science & White House Report (Steve Schwartz) – 4

Economic Impact of Lab – 3

Peak Oil (peak of World's ability to produce oil) - 3

Non-proliferation – 2

Progress on Strategic Plan Update (Discovery Park) – 1

Long-Term Vision for BNL – 1

More Lab History – 1

Status, Progress, Production Report on LI Solar Array – 1

NSLS-II Research – 1

				Jan	Feb Info session only	Mar	Apr	May	June	July No mtg	Aug No mtg	Sep	Oct	Nov	Dec
P = Present	2015	Affiliation		First Name	Last Name										
		ABCO – Civic (Garber - 04/02) (Bevington – 6/14) (Keenan-10/14)	Member	Ray	Keenan	P		P	P	P			P		
		(Madigan -10/10)	Alternate	Michael	Madigan	P				P					
		American Physical Society – Business & Labor	Member	Reinhart	Schuhmann	P		P		P	P		P		
		(Schuhmann 1/14, member 9/15)	Alternate	Donavan	Hall				P						
		Brookhaven Coalition of Chambers of Commerce – Bus & Labor (added 6/15)	Member	Ron	Trotta			P		P	P				
		Brookhaven Retired Employees Association- BNL (Peskin - 09/09)	Member	Arnie	Peskin	P		P		P	P		P		
		(Franz - 12/09)	Alternate	Eena-Mai	Franz	P			P		P				
		(Shapiro-1/13)	Alternate	Steve	Shapiro										
		Citizens Campaign for the Environment – Advocacy & Environment	Member	Adrienne	Esposito	P				P	P		P		
			Alternate												
		Colonial Woods Whispering Pines – Civic (Birben - 06/09) (O'Neal 01/15, removed 10/15)	Member												
		(Rehbein -11/10)	Alternate	Eric	Rehbein										
		Coram Civic Association (Ziems - 06/12)	Member	Paul	Ziems	P		P	P	P	P		P		
		(Meade – 06/12, Jim M 10/12, Turk 1/16)	Alternate	Rosa	Turk	P		P	P	P	P		P		
		East Yaphank Civic Association	Member	Michael	Giacomaro	P			P	P	P				
		(Feinman - 02/09 – 11/15)(Mack 11/15)	Alternate	Catherine	Mack			P	P	P			P		
		Emeritus (changed 3/8/12)	Member	Jean	Mannhaupt										
		Foundation for Economic Education – Ed, Sci, & Tech (5/14)(Martin – 10/14)	Member	Bruce	Martin			P	P	P			P		
		(Pratka – 10/14)	Alternate	Craig	Pratka			P	P	P	P				
		Friends of Brookhaven- BNL (Kaplan 07/01–11/15)(Bowerman 11/15)	Member	Biays	Bowerman	P		P	P	P	P		P		
		(Schwartz - 11/02) (Ocko added 11/15)	Alternate	Steve	Schwartz			P							
			Alternate2	Ben	Ocko										
		Huntington Breast Cancer Coalition – Health-Based Rep	Member	Mary Joan	Shea	P			P	P					
			Alternate	Scott	Carlin										
		Individual	Member	Jane	Corrarino	P							P		
		Individual	Member	Blumer	Karen					P					
		Individual	Alternate	Michael	Madigan	P		P	P	P			P		
		L.I. Pine Barrens Society – Advoc & Env	Member	Richard	Amper										
		(Murdocco - 04/11, deleted 6/12) (Muller added – 8/12)(Katie Rose Leonard added – 6/13)(Muether added – 5/15)	Alternate	Katie	Muether			P	P	P			P		
		L.I. Progressive Coalition – Advoc & Env	Member	David	Sprintzen	P		P		P	P		P		

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P = Present	2015	Affiliation	First Name	Last Name											
		Alternate													
		Member	Rita	Biss	P		P	P	P			P			
		Alternate	Bonita	Grandal	P		P	P	P			P			
		Member	Tracy	Adams											
		Alternate													
		Member	John	Sicignano			P		P						
		Alternate	Clara	McManus											
		Alternate	Joe	May											
		Member													
		Alternate	Margaret	Malloy			P			P					
		Member	Jean	Jordan-Sweet	P			P	P			P			
		Alternate	Jen	Bohon			P								
		Member	Wesley	Chattaway	P		P	P		P		P			
		Member	Al	Krupski			P		P			P			
		Alternate	John	Stype				P							
		Member	Richard	Murdocco											
		Alternate	Suzanne	Gillan					P			P			
		Alternate	Christine	Stafford								P			
		Member													
		Alternate													
		Member	James	Heil	P			P		P					
		Alternate													
		Member	Isidore	Doroski	P		P		P	P		P			
		Alternate	Janis	Rottkamp				P	P	P					
		Member	Linda	Rundlett	P		P		P	P		P			
		Alternate	Sid	Bail											
		Alternate	Helga	Guthy											